

Serial No.: 10/822,004
Docket No.: 101-1028
Amendment dated June 21, 2006
Reply to the Office Action of March 23, 2006

Amendments to the Drawings

The attached replacement drawing sheets make changes to Figs. 11 and 12, and the replacement sheets replace the original sheets with Figs. 11 and 12.

Attachment: Replacement Sheets

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REMARKS

Introduction

Applicants note with appreciation the Examiner's indication that claims 2, 7-13 and 28 would be allowed if rewritten in independent form and that claims 22-24 are allowed.

Upon entry of the foregoing amendment, claims 1-39 are pending in the application. Claims 1, 19, 25, 26, and 29 have been amended. Claim 28 has been cancelled, and new claims 30-39 have been added. No new matter is being presented. In view of the following remarks, reconsideration and allowance of all the pending claims are requested.

Drawings

The Examiner has objected to the drawings as failing to show every feature of the invention specified in the claims. Applicants have amended FIGS. 11 and 12 to include reference numbers 510a, 520a, 530a, and 540a to refer to the left side, the top side, the front side, and the right side of the housing 500 of the image forming apparatus, respectively. Additionally, Applicants have amended the language of paragraph [0079] of the specification and independent claim 26, accordingly.

Claim Objections

The Examiner has objected to claims 1-18 "because claim 1 recites the intermediate transfer unit has a transfer belt." Although it is unclear why the Examiner is objecting to the language "transfer belt" in claim 1, Applicants respectfully point out that the transfer belt 5 is described at various portions of the specification and is shown in the drawings at, for example, reference number 5 in FIG. 5. Accordingly, Applicants respectfully request that the Examiner withdraw this objection.

The Examiner has also objected to claim 29 as containing a minor informality. Applicants have amended claim 29 to depend from independent claim 26. Accordingly,

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Applicants respectfully request that the Examiner withdraw the objection.

Rejections under 35 USC §102

Claims 19-21 and 25-27 have been rejected under 35 U.S.C. §102(b) as being anticipated by JP 10-239930A to Haneda. Applicants respectfully request reconsideration of these claims for at least the following reasons.

Claims 19-21

Regarding independent claim 19, the Examiner relies on Haneda as allegedly teaching each of the features of independent claim 19. However, Applicants submit that Haneda fails to disclose “one or more rails provided on the main frame” and “an erroneous insertion preventing unit to mount the plurality of development units on corresponding ones of the rails to mount the plurality of development units on a predetermined rail among the plurality of rails,” as presently recited in independent claim 19 of Applicants’ invention. In contrast with the present invention, Haneda describes that a unit connection member 303 integrates developing devices 13 for separate colors, and the unit connection member 303 is pulled out along a guide plate 104. Since the developing devices 13 are disposed in the unit connection member 303 and are then disposed on the guide plate 104, a side frame 101 (102) of the device shown in Haneda does not include “one or more rails.” Additionally, Haneda fails to disclose “an erroneous insertion preventing unit to mount the plurality of development units on corresponding ones of the rails,” as presently recited in independent claim 19 of Applicants’ invention. Accordingly, Applicants respectfully submit that Haneda fails to disclose “one or more rails provided on the main frame” and “an erroneous insertion preventing unit to mount the plurality of development units on corresponding ones of the rails,” as presently recited in independent claim 19 of Applicants’ invention.

“A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” Verdegaal Bros. v. Union Oil Co. of California, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). The identical invention must be shown in as complete detail as contained in the...claim.”

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Richardson v. Suzuki Motor Co., 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). "The elements must be arranged as required by the claim..." In re Bond, 910 F.2d 831, 15 USPQ2d 1566 (Fed. Cir. 1990). Further, in the event that the Office Action is relying on the theory of inherency in any manner, "the Examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied art." Ex parte Levy, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990) (emphasis in original). Accordingly, since the Haneda reference does not explicitly or inherently disclose every element as presently recited in independent claim 19, this reference can not be properly used to reject claim 19 under 35 U.S.C. § 102. Therefore, it is respectfully submitted that independent claim 19 is allowable over the Haneda reference, and withdrawal of this rejection and allowance of this claim are earnestly solicited.

Applicants respectfully submit that for at least the reason that each of claims 20-21 depend from independent claim 19, and therefore contain all of the features as presently recited in independent claim 19, these claims are also patentable over the Haneda reference. Accordingly, withdrawal of the rejection and allowance of these claims are earnestly solicited.

Claim 25

With regard to independent claim 25, Applicants respectfully submit that the device shown in Haneda does not include "an exposure unit disposed below the photosensitive drum unit to form the electrostatic latent image on the photosensitive drum," as presently recited in independent claim 25 of Applicants' invention. On the contrary, it is evident from drawings 1, 4, and 5 of Haneda that Haneda's exposure unit 120 is disposed above the photosensitive drum 10 (i.e., not below). Accordingly, since Haneda's exposure unit 120 is disposed above the photosensitive drum 10, Applicants respectfully submit that Haneda fails to disclose "an exposure unit disposed below the photosensitive drum unit to form the electrostatic latent image on the photosensitive drum," as presently recited in independent claim 25 of Applicants' invention.

Since the Haneda reference does not explicitly or inherently disclose every element as presently recited in independent claim 25, this reference can not be properly used to reject claim 25 under 35 U.S.C. § 102. Therefore, it is respectfully submitted that independent claim 25 is

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allowable over the Haneda reference, and withdrawal of this rejection and allowance of this claim are earnestly solicited.

Claims 26 and 27

At page 5, item 11 of the Office Action of March 23, 2006, the Examiner indicated that dependent claim 28 would be allowed if rewritten in independent form. Accordingly, Applicants have incorporated dependent claim 28 into independent claim 26, as suggested by the Examiner.

Since the Haneda reference does not explicitly or inherently disclose every element as presently recited in independent claim 26, this reference can not be properly used to reject claim 26 under 35 U.S.C. § 102. Therefore, it is respectfully submitted that independent claim 26 is allowable over the Haneda reference, and withdrawal of this rejection and allowance of this claim are earnestly solicited.

Applicants respectfully submit that for at least the reason that claim 27 depends from independent claim 26, and therefore contains all of the features as presently recited in independent claim 26, this claim is also patentable over the Haneda reference. Accordingly, withdrawal of the rejection and allowance of this claim are earnestly solicited.

Claims 1, 3 and 5-6 have been rejected under 35 USC §102(b) as being anticipated by U.S. Patent No. 2003/0086732 to Abe et al. Applicants respectfully request reconsideration of these claims for at least the following reasons.

At page 3, item 5 of the Office Action of March 23, 2006, the Examiner alleges that Abe et al. teaches each of the features of independent claim 1. Abe et al. is directed to an image forming apparatus having a housing body 2, a first movable section 3 that is pivotally movable with respect to the housing body 2, and a second movable section 50 that is pivotally movable with respect to the housing body 2 and the first movable section 3. See Abe et al. paragraphs [0064] and [0070]. In particular, the first and second movable sections 3 and 50 can be opened such that an image forming unit 7, which includes a photoconductive drum, and a transfer belt unit 9, which are disposed on the second movable section 50, are exposed. See Abe et al.

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paragraph [0070]. See Abe et al. FIG. 8. Once the second movable section 50 is opened (i.e., pivotally moved horizontally from the housing body 2), the image forming unit 7 and the transfer belt unit 9 can be removed from the second movable section 50. See Abe et al. paragraph [0071].

However, in order to remove the transfer belt unit 9 and the image forming unit 7, which includes a photoconductive drum 17, the second movable section 50 must first be pivoted horizontally with respect to the housing body 2 to provide access to these components. Once the second movable section 50 is horizontally pivoted, these components can be removed. See Abe et al. FIG. 9. It is evident from FIG. 8 of Abe et al. that the image forming unit 7 and the transfer belt unit 9 are horizontally pivoted from their respective operating positions by the second movable section 50. Thus, the image forming unit 7 and the transfer belt unit 9 are not "vertically detachably installed at" their respective "operating position[s] in the internal space of the" housing body 2, as presently recited in independent claim 1.

In contrast with the present invention, the image forming unit 7 and the transfer belt unit 9 are not in their respective operating positions when the second movable section 50 is open with respect to the housing body 2, since these components cannot operate when the second movable section 50 is in the open position shown in FIG. 8 of Abe et al. Furthermore, even when the second movable section 50 is opened (See FIG. 8 of Abe et al.) and the image forming unit 7 and the transfer belt unit 9 are vertically removable therefrom, these components are not "vertically detachably installed...in the internal space of the main frame...", as presently recited in independent claim 1. Thus, Abe et al. fails to disclose, among other things, "a photosensitive drum unit vertically detachably installed at a drum operating position in the internal space of the main frame" and "an intermediate transfer unit vertically detachably installed at a transfer unit operating position in the internal space of the main frame," as presently recited in independent claim 1 of Applicants' invention.

Moreover, the Abe et al. fails to disclose "a main frame to define an internal space of the electrophotographic printer," "a photosensitive drum unit vertically detachably installed at a drum operating position in the internal space of the main frame," "an intermediate transfer unit vertically detachably installed at a transfer unit operating position in the internal space of the

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main frame,” and “wherein...the photosensitive drum unit and the intermediate transfer unit operate in the drum operating position and the transfer unit operating position, respectively,” as presently recited in independent claim 1 of Applicants’ invention.

Accordingly, since the Abe et al. reference does not explicitly or inherently disclose every element as presently recited in independent claim 1, this reference can not be properly used to reject claim 1 under 35 U.S.C. § 102. Therefore, it is respectfully submitted that independent claim 1 is allowable over the Abe et al. reference, and withdrawal of this rejection and allowance of this claim are earnestly solicited.

Applicants respectfully submit that for at least the reason that each of claims 3, 5, and 6 depend from independent claim 1, and therefore contain all of the features as presently recited in independent claim 1, these claims are also patentable over the Abe et al. reference. Accordingly, withdrawal of the rejections and allowance of these claims are earnestly solicited.

Rejections under 35 USC §103

Claims 14-18 have been rejected under 35 USC §103(a) as being unpatentable over Abe et al. in view of U.S. Publication No. 2004/0170450 to Hamano et al. Applicants respectfully request reconsideration of these claims for at least the following reason.

Claims 14-18 directly or indirectly depend from independent claim 1, and therefore include the features as presently recited in independent claim 1. The Examiner acknowledges that Abe et al. does not teach a transfer roller device. See Office Action of March 23, 2006 page 4, item 8. However, the Examiner relies on Hamano et al. to allegedly teach or suggest the features admittedly lacking in Abe et al. See Office Action of March 23, 2006 page 5, item 8. Applicants respectfully submit that even if it is assumed that it were proper to combine Abe et al. with Hamano et al. to describe a transfer device having a transfer roller, as alleged by the Examiner, Abe et al. and Hamano et al., either separately or in combination, fail to teach or suggest, among other things, “a main frame to define an internal space of the electrophotographic printer,” “a photosensitive drum unit vertically detachably installed at a drum operating position in the internal space of the main frame,” “an intermediate transfer unit

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vertically detachably installed at a transfer unit operating position in the internal space of the main frame,” and “wherein...the photosensitive drum unit and the intermediate transfer unit operate in the drum operating position and the transfer unit operating position, respectively,” as presently recited in independent claim 1 of Applicants’ invention. Accordingly, claims 14-18 are patentable over the references relied upon by the Examiner, and withdrawal of the rejection and allowance of these claims are earnestly solicited.

Claim 4 has been rejected under 35 U.S.C. §103(a) as being unpatentable over Abe et al. in view of U.S. Patent No. 4,837,598 to Nonami. Applicants respectfully request reconsideration of this claim for at least the following reason.

Claim 4 indirectly depends from independent claim 1, and therefore includes the features as presently recited in independent claim 1. The Examiner acknowledges that Abe et al. does not teach an eraser device. See Office Action of March 23, 2006 page 5, item 9. However, the Examiner relies on Nonami to allegedly teach or suggest the features admittedly lacking in Abe et al. See Office Action of March 23, 2006 page 5, item 9. Applicants respectfully submit that even if it is assumed that it were proper to combine Abe et al. with Nonami to describe an eraser device with a light guide, as alleged by the Examiner, Abe et al. and Nonami, either separately or in combination, fail to teach or suggest, among other things, “a main frame to define an internal space of the electrophotographic printer,” “a photosensitive drum unit vertically detachably installed at a drum operating position in the internal space of the main frame,” “an intermediate transfer unit vertically detachably installed at a transfer unit operating position in the internal space of the main frame,” and “wherein...the photosensitive drum unit and the intermediate transfer unit operate in the drum operating position and the transfer unit operating position, respectively,” as presently recited in independent claim 1 of Applicants’ invention. Accordingly, claim 4 is patentable over the references relied upon by the Examiner, and withdrawal of the rejection and allowance of this claim are earnestly solicited.

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New Claims

Claims 30-39 have been newly added. New dependent claim 30 further defines some of the features recited in independent claim 26, as presently recited. New independent claim 31 recites features which are not, disclosed, taught, or suggested by the prior art of record, for example, "a developing unit to be installed independently from the photosensitive drum in the frame through the second side and having at least one developing roller and a position determining unit to maintain a developing gap between the at least one developing roller and the photosensitive drum." New dependent claim 32 further defines the features as recited in independent claim 31. New independent claim 33 also recites features which are not, disclosed, taught, or suggested by the prior art of record, for example, "a plurality of rails provided on the frame" and "an erroneous insertion preventing unit to mount the plurality of development units on a predetermined rail among the plurality of rails." New dependent claim 34 further defines the features recited in independent claim 33.

Applicants respectfully submit that support for newly added claim 30 can be found in FIG. 14, and the corresponding portions of the detailed description. Support for newly added claims 31 to 34 can be found in original claims 7-10, respectively, FIGS. 11 and 12, and corresponding portions of the detailed description. Accordingly, it is respectfully submitted that new claims 30 to 34 do not present new matter, and are allowable over the prior art of record, and allowance of these claims are earnestly solicited.

New independent claim 35 recites features which are not, disclosed, taught, or suggested by the prior art of record, for example, "a frame having a first side, second side, and a third side to define an inner space," "a first rail formed on a first portion of the third side to guide a photosensitive drum unit into the inner space through the first side," "a second rail formed on a second portion of the third side to guide an intermediate transfer unit into the inner space through the first side," and "a third rail formed on a third portion of the third side to guide a developing unit into the inner space through the second side." New dependent claims 36-39 further define the features as recited in independent claim 35.

Applicants respectfully submit that support for newly added claims 35-39 can be found in FIGS. 2, 11, and 12, and the corresponding portions of the detailed description. Accordingly, it is respectfully submitted that new claims 35-39 do not present new matter, and are allowable

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over the prior art of record, and allowance of these claims are earnestly solicited.

Allowable Subject Matter

Claims 22-24 are allowed. Claims 2, 7-13, and 29 have been objected to as being allowable if rewritten in independent form.

Conclusion

It is respectfully submitted that a full and complete response has been made to the outstanding Office Action and, as such, there being no other objections or rejections, this application is in condition for allowance, and a notice to this effect is earnestly solicited.

If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided below.

A \$1050 fee for additional claims has been incurred by this Amendment. If any further fees are required in connection with the filing of this amendment, please charge the same to out Deposit Account No. 502827.

Respectfully submitted,

STANZIONE & KIM, LLP



By: _____
Daniel E. Valencia
Registration No. 56,463

Dated: June 21, 2006
919 18th St., NW, Suite 440
Washington, DC 20006
Telephone: (202) 775-1900
Facsimile: (202) 775-1901